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## CRUISE REPORT

FRS "EXPLORER"

20-29 March 1974 (Part II)

## OBJECTIVE:

To test the engineering performance of prototype pelagic otter-boards incorporating spinning rotors (Charlie boards). Also to determine the variation in net depth that can be achieved through the use of these boards, with two nets of different drag.

## NARRATIVE:

The gear and instruments were loaded and the electrical cored warps wound on to the winch drums of "Explorer" by 1600 hours on 20 March at Greenock.

The ship was delayed at Greenock due to gyro-compass failure till 1030 hours on 22 March. "Explorer" then sailed to the deep waters North of Rona Island. Gear trials commenced on 23rd and continued till 26 March when "Explorer" steamed to Aberdeen to complete the cruise by 1500 hours on 27 March.

## RESULTS:

"Charlie" rotors were tested in the leading and trailing edges of the board and worked well after minor modifications. The small mesh gadoid net and the larger meshed MK2C were used with standard rigging and the "Charlie" boards.

The depth of the nets changed by an average of 10fms when the rotors were switched on at a towing speed of 3 knots. Larger depth changes were observed at higher speeds when the rotors were switched on or off. A similar effect was also observed with increased warp length aft. The change of net depth with rotors on were similar in magnitude for both of the nets used.

Reversing the motor rotation direction and hence generating a force opposing that due to board hydrodynamics caused the board spread to decrease by 40% of normal. This also tended to magnify the variation of depth caused by the rotor being switched on.

The trials were restricted to eight hauls but the limited data confirmed in the cases tested the feasibility of using "Charlie" boards for pelagic trawling.

S T R de Silva  
26 April 1974